

1 What is claimed is:

1 1. A heat spreader comprising:

2 a body having a top surface, a bottom surface, at least one side and at least one corner;

3 a plurality of downset legs formed thereon, wherein the plurality of downset legs are formed

4 to be downset from the body bottom surface by a distance, wherein the plurality of downset legs

5 and the body bottom surface define a cavity; and

6 at least one notch formed between the top surface and the bottom surface proximate to the

7 at least one corner.

1 2. The heat spreader of claim 1, wherein at least one downset leg is formed proximate to the at

2 least one corner of the heat spreader body.

1 3. The heat spreader of claim 1, wherein at least one of the downset legs has a void formed

2 therein, wherein the void is configured to receive at least one mechanical attachment device.

1 4. The heat spreader of claim 1, wherein the at least one downset leg is configured to receive

2 at least one clip.

1 5. The heat spreader of claim 1, wherein the body and the at least one downset leg is

2 comprised of thermally conductive material.

1 6. The heat spreader of claim 1, wherein the cavity is configured to receive at least one

2 microelectronic die.

1 7. A method of forming a heat spreader comprising:

- 2     forming a mass of material approximately rectangular in shape; and
- 3     forming at least one downset leg on the mass of material.

1     8. The method of claim 7, wherein the forming comprises at least one cold forming process.

1     9. The method of claim 7, wherein the method further comprises forming at least one corner on  
2     the mass of material, wherein the at least one downset leg is formed in the vicinity of the corner.

1     10. The method of claim 7, wherein at least one void is formed on the at least one downset leg,  
2     wherein the void is configured to receive at least one mechanical attachment device.

1     11. The method of claim 7, wherein the at least one downset leg is formed to be configured to  
2     received at least one clamp.

1     12. A microelectronic package comprising:

2     a substrate having a surface;

3     at least one microelectronic die attached to the surface; and

4     a heat spreader attached to the surface, wherein the heat spreader has a top surface, a

5     bottom surface, at least one side and at least one corner, wherein a plurality of downset legs is

6     formed thereon, wherein the plurality of downset legs are formed to be downset from the bottom

7     surface by a distance, and the plurality of downset legs and the bottom surface define a cavity,

8     and at least one notch formed between the top surface and the bottom surface proximate to the

9     at least one corner.

1 13. The microelectronic package of claim 12, wherein said microelectronic die is configured to  
2 be disposed within the cavity, and is configured to be attached to the bottom surface of the heat  
3 spreader.

1 14. The microelectronic package of claim 12, wherein at least one of the plurality of downset  
2 legs is formed in the vicinity of the corner of said heat spreader.

1 15. The microelectronic package of claim 12, wherein at least one of the plurality of downset  
2 legs has at least one void formed thereon, wherein the at least one void is configured to receive  
3 one or more mechanical attachment devices.

1 16. The microelectronic package of claim 12, wherein the at least one downset leg is configured  
2 to receive one or more clips.

1 17. The microelectronic package of claim 12, wherein the heat spreader is comprised of  
2 thermally conductive material.

1 18. The microelectronic package of claim 12, wherein the top surface is approximately  
2 octagonal in shape.

1 19. A computing system comprising:  
2 a microelectronic package, which includes a substrate having a surface;  
3 at least one microelectronic die attached to the surface; and  
4 a heat spreader attached to the surface, wherein the heat spreader has a top surface, a  
5 bottom surface, at least one side and at least one corner, wherein a plurality of downset legs is  
6 formed thereon, wherein the plurality of downset legs are formed to be downset from the bottom

7 surface by a distance, and the plurality of downset legs and the bottom surface define a cavity,  
8 and at least one notch formed between the top surface and the bottom surface proximate to the  
9 at least one corner.

1 20. The computing system of claim 19, wherein the microelectronic die is configured to be  
2 disposed within the cavity, and is configured to be attached to the bottom surface of the heat  
3 spreader.

1 21. The computing system of claim 19, wherein at least one of the plurality of downset legs is  
2 formed in the vicinity of the corner of said heat spreader.

1 22. The computing system of claim 19, wherein at least one of the plurality of downset legs has  
2 at least one void formed thereon, wherein the at least one void is configured to receive one or  
3 more mechanical attachment devices.

1 23. The computing system of claim 19, wherein the at least one downset leg is configured to  
2 receive one or more clips.

1 24. The computing system of claim 19, wherein the heat spreader is comprised of thermally  
2 conductive material.

1 25. The computing system of claim 19, wherein the top surface is approximately octagonal in  
2 shape.